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Reducing floods: Early warning system a must

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Careful planning can prevent wastage of public money
Early
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THE government plans to have an early warning system for flood prevention.

Association of Water and Energy Research Malaysia (AWER) has studied the issue and would like to give some comments on the proposal.

First of all, AWER fully supports the call by Deputy Prime Minister Tan Sri Muhyiddin Yassin to set up an early warning system to detect floods. Based on research projections, Malaysia will face extreme drought and floods due to climate change, rapid development and loss of forest cover. Thus, a nationwide early warning system is one way of detecting flood occurrence and preventing unwanted incidents.

A 10 per cent increase in rainfall intensity will raise flood occurrences tremendously, due to increase in surface run-off and reduction in carrying capacity of both natural and man-made drainage.

The second part of flood management is mitigating the flood. This needs a lot of technical input and design work. AWER would like to suggest the following to be carried out to ensure effective mitigation:

- Analysis between loss of forest cover and flood occurrences must be done. There is a definite link as loss of forest cover causes loss of natural water retention ability. This will also help to identify downstream areas that will be directly affected during heavy and continuous downpour. Some of these areas might not have been flooded before.
- Old settlements and townships have old designs for drainage. With rapid developments around these areas, the carrying capacity of the drainage system will be reduced. Redesigning such drainage systems is vital to prevent drainage failures that cause floods.
- Minimum permeable surface designed for new townships as well as retention ponds with bigger capacity must be made mandatory. Permeable surface will absorb rainwater and reduce surface water flow. Retention ponds will be able to delay surface water flow to drainage systems. However, retention ponds need periodic maintenance to prevent failure of its functions.
- Local government land use planning needs to be audited. This is to ensure there is no over-development in low land or flat land areas. Too much covered lands will cause rise in surface water flow during heavy rains. Therefore, adequate flood prevention can be carried out effectively.
- There should be an audit to all flood prevention projects implemented and planned for the future to ensure its planning and execution meets the intended target. Such a project usually causes more impact if we fail to carry out maintenance periodically. Therefore, stricter Key Performance Index (KPI) should be

set for agencies that carry out such projects, to ensure good operating conditions.

Root-cause analysis is important for us to plan ahead. AWER urges all the related authorities to carry out the above suggestions before planning for mega projects in flood mitigation. Careful planning can prevent wastage of public funds and add more functions to the projects that are carried out.

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